

tion of the A.M.A. (which set out the position, the Association's attitude towards it, and the methods proposed to deal with it), implemented by a "white list" and aided by corporate and individual acts of the defendants. On the other hand, the defendants contended that there was no purpose or plan to restrain Group Health, the hospitals or doctors; that their acts were intended only to oppose Group Health by legitimate argument and persuasion; that no coercion was practised or intended against the hospitals; and that the "white list" and disciplinary proceedings against members represented reasonable action taken by authority to protect the organization and its standards of medical practice; and that if those actions interfered with Group Health and its doctors the effect was an incidental and indirect result of acts done legally and in good faith for legitimate ends.

The learned judge pointed out that reasonable discipline and control of members of a society are essential, but they cannot be justified where the real purpose or the natural results of their exercise are to interfere with free competition. Refusal to consult with particular physicians is not in itself illegal, but it may be illegal if done in furtherance of a conspiracy. A doctor may refuse to treat patients in a particular hospital, but if a group of doctors carrying out a concerted scheme refused to treat patients in order to injure the business of the hospital they would act illegally. The defendants were not entitled to oppose Group Health in a manner intended to restrain its operation, but they had the right of legitimate criticism, argument, and persuasion, however persistent and severe, either separately or by collective effort; if such opposition did not take the form of a conspiracy to restrain, it did not violate the statute. Similarly, the "white list" and the Mundt resolution were not wrongful in themselves, but only if perverted to advance the aims of a conspiracy. The same law applies to the action of hospitals in withholding privileges from certain practitioners.

The conviction of the corporations with the acquittal of the individual members directing them has naturally puzzled critics throughout the whole of the United States, and possibly elsewhere. In this country a corporation cannot be charged with a crime, and such a prosecution would have had to be brought only against individuals. The acts alleged against the defendants in this case could not be made the basis of a criminal prosecution here, though they might form ground for a civil action. The history of the British Medical Association does in fact contain, a generation ago, a civil action of this kind. However inconsistent the decision of the American jury may appear, it seems to have decided practical advantages. The *Washington Post* remarks (April 6) that the effect of the verdict is to stop the A.M.A. and the associated societies from interfering with the Group Health Association or other group practice enterprises which may fill a social need in present times. On the other hand, the verdict leaves no reflection upon the well-known medical practitioners and officials who were indicted for conspiracy, and recognizes that they had no intention of acting illegally. The finding may yet be reversed on appeal, and so the position cannot now be regarded as settled. The Sherman Law may possibly have to be reconsidered before the case is finally decided.

DESTRUCTION AT THE ROYAL COLLEGE OF SURGEONS

We are glad to supplement last week's article published at page 830 under the above heading and make certain corrections. Much further information is now available which the medical profession will wish to have at the earliest moment. With regard to the pictures and the Library, which were scarcely mentioned in our report, all the College portraits, except a very few having little artistic or historical interest, were sent away before the outbreak of war. Nearly 90,000 volumes from the Library have been sent to various parts of the country, the transfer being aided by a generous grant from the Rockefeller Foundation. The only books now standing on the shelves are standard textbooks; these and some current periodicals have been kept for reference. The principal treasures of the Library had been sent away before the outbreak of war, and none of the books remaining at Lincoln's Inn Fields has suffered damage in air raids. In addition to the specimens which were reported last week as safe, we are happy to learn of many others that escaped. The basement of the College covers a very wide area, and not more than one-fifth of it was involved in the fire. Many rooms and a number of cellars in which specimens were placed for safety were unaffected. The more important specimens had been taken to a tunnel below the basement and surrounded by sand; others were placed in branches from this tunnel. Some of the tunnels, already very strong, had been specially reinforced. All the specimens in the main tunnel and the majority of those in the branches were saved from destruction. The important College records and historical documents had been sent away. Only the working records dealing with the distribution of those specimens which had been placed in the basement and sub-basement for safety, and the records of pathological specimens presented to the College during the last few years, were destroyed. The preservation of copies of the Museum catalogues had been carefully considered and appropriate steps taken. All were saved with the exception of the catalogue of part of the Pathological Section, and that of the Curio Room, but nearly all of the specimens in this room are described in the "Guide to Surgical Instruments and Objects in the Historical Series." No fewer than 3,750 of the Hunterian specimens which are safe have already been catalogued, and it is expected that this number will be increased. The original Gibraltar fossil cranium is safe; and while much of the teratological collection was lost, the major part of the collection, consisting of 950 specimens, has been saved. Ninety-five specimens, or rather more than one-third, of the Onodi collection are safe. The greater part of the large collection of instruments is also safe and can be restored. Among the instruments that are intact are the Lister, the Moynihan, and the Chinese and Japanese collections; also the series illustrating the evolution of anaesthetic apparatus.

Thus, though the loss that the Museum has suffered is grievous, and much of it is irreplaceable, the destruction of specimens is not quite so great as was at first feared. Enough has been saved to form the basis of the new Museum, which will continue the Hunterian tradition.

NEW SULPHONAMIDE COMPOUNDS

A series of reports from the United States shows that rapid progress is being made there in synthesizing and testing new sulphonamide compounds. We have already referred in this *Journal* to sulphadiazine (2-sulphanilamidopyrimidine), a drug with properties which at least in the pharmacological sense represent an immense advance. These are fully confirmed in a careful study of its absorp-

tion, distribution, and excretion by O. L. Petersen *et al.*¹ Higher blood levels are attained with this drug than with any other sulphonamide compound, and sustained longer, so that it evidently need not be given more often than six-hourly. The concentration in the blood plasma exceeds that in the blood cells, an advantage shared with sulphathiazole; on the other hand, where sulphathiazole is at some disadvantage—namely, in reaching the cerebrospinal fluid in a concentration only one-third of that in the blood—sulphadiazine resembles sulphanilamide and sulphapyridine in attaining a concentration two-thirds of the blood level. Conjugation is slight and not progressive, the acetyl compound being readily excreted. More welcome to patients themselves than any of these properties will be the fact that this drug does not cause nausea or even mental depression. It is known to be active against all the chief infections amenable to sulphonamide treatment, but comparative studies of therapeutic efficacy have yet to be made.

Two other new compounds have made their appearance in America, neither of which seems at first sight to have such outstanding properties as sulphadiazine, although each has its interesting points. "Promin" is the name given to the sodium salt of *p*.*p'*-diamino-diphenyl-sulfone-N.N'-dextrose sulphonate, and a series of papers by J. A. Toomey and his colleagues² records some preliminary clinical trials with it. This drug is best given intravenously in 5-gramme doses thrice daily; oral administration is said to cause more toxic effects, and to have also the disadvantage of irregular absorption. It appears from these studies only that the drug is reasonably well tolerated and has an action comparable with that of sulphanilamide on streptococcal infections. A more remarkable action is illustrated in the work of W. H. Feldman *et al.*³ on experimental tuberculosis in the guinea-pig. The drug was here fed to the animals with no apparent difficulty or ill effect, and seems to have retarded the progress of the disease after inoculation with virulent tubercle bacilli in a very striking way, but the experiment was complicated by intercurrent infection and needs to be repeated. It was shown some years ago by Rich that large doses of sulphanilamide retarded the development of tuberculosis in the guinea-pig to some extent, but the effect achieved here was evidently greater.

A third new compound on trial in America is sulphanilylguanidine, which has quite different properties and uses. Owing to its low degree of solubility and slow absorption, it is possible, as E. K. Marshall *et al.*⁴ have now shown, to maintain saturation of the intestinal contents with the drug, while the blood concentration remains low. It has accordingly been used, and with some success, in the treatment of bacillary dysentery. This is perhaps not quite as hopeful a sphere of action as, for instance, the urinary tract, but anything with a specific local effect on intestinal infections, even if less sure and speedy than what we can now see elsewhere in the body, will be a welcome innovation.

EMPLOYMENT OF WOMEN IN INDUSTRY

The medical problems, many of them with a sociological bearing, which have been created or intensified by the recent entrance of large numbers of women into industry were debated at a meeting of the Association of Industrial Medical Officers held recently in London. Dr. M. L. Dobbie-Bateman, in opening the discussion, based her remarks on the sickness records for the five years 1935-9 of a group of about 6,000 people employed in a retail

distributive house, the sexes almost equally represented. The average annual number of days lost through sickness for each male worker was 4.01 and for each female worker 6.36. An analysis of the conditions which caused sickness showed in respect of diseases of the genital organs a 500% excess among females over males, but the total number of days lost in this group was so small as to be almost statistically negligible, being only 0.24 out of 6.36 for the female worker, and 0.04 out of 4.01 for the male. The same applied to the 200% excess amongst female workers on account of dental disease. Respiratory diseases accounted for just about half the total of sick absenteeism, and here the female excess over the male was 75%. Only in respect of diseases of the locomotor system and of accidents were the male figures in excess of the female. Dr. Dobbie-Bateman's conclusion was that there was a consistently higher sickness rate among women employed in industry, that gynaecological conditions did not entirely explain the excess, and that a large part of the female disability was due to the fact that the working woman tried to do two things at once—to earn her living and to be responsible for her household duties. Miss F. I. Taylor, Deputy Chief Inspector of Factories, said that in peacetime the women working in factories were mostly young; the average life of a woman in a factory was reckoned at ten years, from school-leaving age until 24, but now there was a tendency for older and married women to be employed. One important consideration was the hours of employment. Peacetime restrictions in this respect could not be maintained, and longer hours were being worked than those concerned with factory welfare could approve, but, generally speaking, an endeavour was made to keep the working week below 60 hours and to ensure that every woman had one day off in seven or two in fourteen. A return from 5,000 factories showed that nearly half of them were working over 56 hours but under 60. The disadvantage of over-long hours was illustrated by the experience of a factory which had been working 54 hours and found it impossible to maintain production until every third week the hours were reduced to 48. Dr. L. S. Swanston, medical officer at one of the new ordnance factories, mentioned that the incidence of rejection on medical grounds among women applicants for employment was only 7% to 8%; on the other hand, the standard was not high. In her own department, during 1940, 52 women reported pregnant. As soon as this happened the woman was taken off night shifts and overtime, put on sedentary work, and examined every fortnight. She remained at work until the seventh month and was allowed to resume work one month after confinement. In the subsequent discussion it was urged by more than one speaker that women should not be allowed to continue until as late as the seventh month, and that to resume one month after confinement was far too soon, having in view the health not only of the mother but of the child. Dr. Swanston wanted to see the factory medical service extended to include ophthalmic and dental treatment; the amount of dental sepsis she had seen among these girls was astonishing. She also urged the appointment of a panel consultant in each district upon whom the factory medical officer could call in difficult cases. Dr. Graves Peirce described the work of women on the railways, which in peacetime is chiefly clerical or canteen, but now embraces many unfamiliar roles—porters, ticket collectors, van guards, even engine cleaners and loaders of goods trains, and, in one district in Scotland, platelayers. These women had not yet been working, he said, sufficiently long for sickness figures to be of any value, but the most outstanding thing in his experience had been the genuine enthusiasm of the women for this work, which, being mainly out of doors, was to many a welcome change from ordinary factory life, and their health did not seem to have suffered.

¹ *Amer. J. med. Sci.*, 1941, **201**, 357.

² *J. Pediatr.*, 1941, **18**, 1, 6, 10.

³ *Proc. Mayo Clin.*, 1940, **15**, 695.

⁴ *Johns Hopk. Hosp. Bull.*, 1941, **68**, 94.